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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,916	03/07/2007	Lambertus A. De Kleine	1321-114 PCT US	8679

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EXAMINER
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ART UNIT	PAPER NUMBER
1621	

MAIL DATE	DELIVERY MODE
11/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/582,916	DE KLEINE ET AL.	
	Examiner	Art Unit	
	Chukwuma O. Nwaonicha	1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 March 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Current Status

Claims 1-20are pending in the application.

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 13 is provides for the use of compounds, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 13 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because of the word "if". It is not clear if the condition set forth is part of the invention. Clarification is required. See line 7.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Hill {US 6,075,158}.

Huang discloses applicants claimed mixture. Applicants have claimed a product by way of a product by process claim. The Examiner did not give any patentable weight to the process step. See column 9-11.

Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Zenftman et al., {US 2,759,962}.

Zenftman et al. discloses applicants claimed mixture. Applicants have claimed a product by way of a product by process claim. The Examiner did not give any patentable weight to the process step. See column 3, example 1.

Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Hardy, Sr. et al., {US 4,034,023}.

Hardy, Sr. et al. discloses applicants claimed mixture. Applicants have claimed a product by way of a product by process claim. The Examiner did not give any patentable weight to the process step. See columns 4 and 5, example 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hardy, Sr. et al., {US 4,034,023} in view of Giolito et al. {US 3,931,367}.

Applicants claim a process comprising the steps of reacting a dichloromonophenyl phosphate and monochlorodiphenyl phosphate with an aliphatic alcohol, in the presence of a Lewis acid catalyst, in the absence of solvent, at a temperature of above 60 to 200°C, and at a pressure of 0.001 to 1.1 bar absolute pressure, and sparging the

reaction mixture with an inert carrier gas if the pressure is above 0.67 bar absolute pressure; wherein all the other variables are as defined in the claims.

Determination of the scope and content of the prior art (M.P.E.P. §2141.01)

Hardy, Sr. et al. teach applicant's claimed process of making mixed phosphate ester compositions consisting essentially of 10% to 19% tributyl phosphate, 62% to 80% dibutyl phenyl phosphate, and 10% to 19% butyl diphenyl phosphate which comprises forming a first reaction product by reacting phosphorus oxychloride with phenol in a molar ratio of 1:0.8 to 1.0 until less than 1% unreacted phenol is present in the reaction mixture, reacting the first reaction product with excess n-butanol at a temperature 35°C to about 150°C at 5 to 100 mm Hg to prepare a crude mixed phosphate ester composition comprising tributyl phosphate, dibutyl phenyl phosphate and butyl diphenyl phosphate, and purifying the crude composition leaving a substantially pure mixed phosphate ester composition. The use of other aliphat6ic alcohol is also taught and the reaction was conducted in the presence of Lewis acid catalyst and in the absence of a solvent. See columns 4 and 5, example 1.

Ascertainment of the difference between the prior art and the claims (M.P.E.P.. §2141.02)

Hardy, Sr. et al. process of making mixed phosphate ester differs from the instantly claimed process in that applicants' claim a process of sparging the reaction medium with an inert carrier gas while Hardy, Sr. et al. is silent about this procedure.

However, the secondary reference of Giolito et al. teaches a process of making mixed phosphate ester wherein the reaction medium is sparged with an inert carrier gas. See column 4, line 66 - line 68, and example 1.

Finding of prima facie obviousness--rational and motivation (M.P.E.P.. §2142-2143)

The instantly claimed process of making mixed phosphate ester would have been suggested to one of ordinary skill because one of ordinary skill wishing to obtain a mixed phosphate ester is taught to employ the process of Hardy, Sr. et al. and Giolito et al.

One of ordinary skill in the art would have a reasonable expectation of success in practicing the instant invention by varying the process conditions and catalyst from the teaching of Hardy, Sr. et al. and Giolito et al. to arrive at the instantly claimed process for preparing a mixed phosphate ester. Said person would have been motivated to practice the teaching of the references cited because they demonstrate that mixed phosphate ester are useful industrial chemicals. The Examiner notes that varying the reaction condition, reactants or the additives in a chemical reaction is a well-known chemical practice to optimize the process efficiency of the system and does not constitute a patentable distinction. Moreover, all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in art at the time of the invention.

Therefore, the instantly claimed invention would therefore have been obvious to one of ordinary skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chukwuma O. Nwaonicha whose telephone number is 571-272-2908. The examiner can normally be reached on Monday thru Friday, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne (Bonnie) Eyler can be reached on 571-272-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chukwuma O. Nwaonicha, Ph.D.
Patent Examiner
Art Unit: 1621

J. PARSA
PRIMARY EXAMINER

for

Yvonne (Bonnie) Eyler
Supervisory Patent Examiner,
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